



RATH, YOUNG AND PIGNATELLI
Professional Association

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TELEPHONE (603) 226-2600 · FACSIMILE (603) 226-2700

SHERILYN BURNETT YOUNG
Attorney at Law

May 3, 2004

Waste Management Council
Attn: Clerk Sclafani
c/o DES Waste Legal Unit
29 Hazen Drive
P.O. Box 95
Concord, New Hampshire 03302-0095

RECEIVED

MAY 03 2004

04-12 WMC

Re: **Collins & Aikman**
Cardinal Landfill Site
Appeal of Revised DES # GWP-198401083-F-001

Dear Clerk Sclafani:

Consistent with our discussion, please find enclosed supplemental material to complete our appeal of Revised DES Permit # GWP-198401083-F-001 on behalf of Collins & Aikman, in accordance with Env-WMC 200, as promulgated in January of 2004.

Enclosed please find a copy of the Certificate of Service for both the Notice of Appeal and this Addendum, pursuant to Env-WMC 204.02(d). Also enclosed is a copy of the Groundwater Management Permit Revision, Permit Number GWP-198401083-F-001, dated April 1, 2004, that is the subject of this appeal. Additionally, the correct contact information for the appellant is as follows:

Collins & Aikman Automotive Company
Attn: Mr. James Thomas
Route 11
Farmington, NH 03835
Telephone: (603) 755-7169

Please call me if any additional information is necessary. Thank you for your assistance in this matter.

Very truly yours,
COPY
Sherilyn Burnett Young

cc: Jim Thomas, C&A
Jeff Klaiber and Boyd Smith, H&A
Susan Willoughby, DES
Attorney Richard Head, NHAGO

COUNSELLORS AT LAW

NASHUA OFFICE: THE GLASS TOWER · 20 TRAFALGAR SQUARE · NASHUA, NEW HAMPSHIRE 03063 · (603) 889-9952 · FAX (603) 595-7489
www.rathlaw.com

CERTIFICATE OF SERVICE

I, Sherilyn Burnett Young, do hereby certify that as of this 3rd day of May 2004, copies of the Notice of Appeal and Addendum with Supplemental Material for Appeal were delivered to Commissioner Michael P. Nolin, Waste Management Division Director Anthony P. Giunta, and Project Manager Susan Willoughby, all of the New Hampshire Department of Environmental Services, and Attorney Richard Head of the Attorney General's Office.

Sherilyn Burnett Young
Sherilyn Burnett Young



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095

(603) 271-3644 FAX (603) 271-2181



April 1, 2004

Mr. James Thomas
Collins & Aikman
Route 11, P.O. Box 547
Farmington, New Hampshire 03835-0547

SUBJECT: FARMINGTON – CARDINAL LANDFILL, Groundwater Management Permit Revision
(DES #198401083)

Dear Mr. Thomas:

Please find enclosed revised Groundwater Management Permit Number GWP-198401083-F-001, approved by the Department of Environmental Services (Department). The original permit was issued for a period of 5 years to monitor the effects of past discharges of volatile organic compounds. This revision incorporates monitoring of a recent remedial action.

All annual monitoring summaries and all required sampling results must be submitted to the Groundwater Management Permits Coordinator at the address above. All correspondence shall contain a cover letter that clearly shows the Department identification number for the site (DES #198401083). Please note that the reporting requirements for this permit are separated into two categories; (1) reports related to the ongoing monitoring of the Groundwater Management Permit wells ("GMP Wells") as listed under Condition #7; and (2) reports related to the monitoring of the remedy "OB-3/BR-1a Wells" as listed under Condition #7. The schedules and duration of monitoring of these categories are different, and March 15, 2005 marks the end of a one-year trial period of "OB-3/BR-1a". Therefore, after March 15, 2005, this GMP will again be revised.

Please note that the portion of the Interim Groundwater Management Zone (GMZ) located on Map R-20, Lot 8, and the Final GMZ must be defined by surveyed metes and bounds. With Condition #9, the Department requires that you provide a full legal description of these property boundaries.

Should you have any questions, please contact me at (603) 271- 6423.

Sincerely,


Susan A. Wootchby, P.E.
Waste Management Division

Gwlib on 'Des1'/permits/manage/#198401083.pmt.doc

Enclosure

cc: Boyd Smith, H&A
Sherilyn Young, Rath, Young & Pignatelli
Don Smith, EPA
Richard Head, NHDOJ
Ernest Creveling, Town of Farmington
Farmington Health Officer
DES# 198401083 File

STANDARD MANAGEMENT PERMIT CONDITIONS

1. The permittee shall not violate Ambient Groundwater Quality Standards (AGQS) adopted by the Department (N.H. Admin. Rules Env-Wm 1403) in groundwater outside the boundaries of the Groundwater Management Zone (GMZ), as shown on the referenced site plans. **The following requirements pertinent to compliance at the Final and Interim GMZs are as provided by NHDES and NHDOJ letters to Collins & Aikman dated May 6, 2003 and August 19, 2003, respectively:**
 - If by March 15, 2005, groundwater concentrations of contaminants of concern (CoC) in both overburden and bedrock do not meet AGQS at one or more monitoring wells at the Final GMZ boundary, the decision to proceed or not with OB-3 will be at the discretion of the Department. The following factors will be considered by the Department in its determination of whether operation of the alternative remedy will continue beyond March 15, 2005:
 - Groundwater CoC concentrations must show strong obvious and consistent reductions and decreasing trends due to the enhanced bioremediation remedy at the monitoring wells between the GDT [gravel delivery trench] and recharge wells and the Final GMZ, and at the Final GMZ boundary.
 - Biodegradation rates must be calculated by a method approved by the Department, and the rates must demonstrate that compliance with the AGQS will be achieved within the time required for groundwater to flow from the GDT/recharge wells to the Final GMZ boundary.
 - The data must demonstrate hydraulic control through a thorough analysis of both: (a) capture of the CoC plume, and (b) the downgradient flowpaths from the recharge of amended water.
 - Within **ten** years of start up (March 15, 2004), all groundwater concentrations **outside** of the Final GMZ boundary shall meet AGQS.
2. The permittee shall not cause groundwater degradation that results in a violation of surface water quality standards (N.H. Admin. Rules Env-Ws 1700) in any surface water body.
3. The permittee shall allow any authorized staff of the Department, or its agent, to enter the property covered by this permit for the purpose of collecting information, examining records, collecting samples, or undertaking other action associated with this permit.
4. The permittee shall apply for the renewal of this permit 90 days prior to its expiration date.
5. This permit is transferable only upon written request to, and approval of, the Department. Compliance with the existing Permit shall be established prior to ownership transfer. Transfer requests shall include the name and address of the person to whom the permit transfer is requested, signature of the current and future permittee, and a summary of all monitoring results to date.
6. The Department reserves the right, under N.H. Admin. Rules Env-Wm 1403, to require additional hydrogeologic studies and/or remedial measures if the Department receives information indicating the need for such work.

(continued)

GWP-198401083-F-001

- **OB-3/BR-1a wells:** PMB101, PMB1S, PMB1D, PMB2S, PMB2D, FMW1S, FMW1D, FMW1BR-S, MW602S, MW602D, MW602BR-S, MW301S, MW301D, MW1001S, MW1001D, MW1001BR-S, MW1002S, MW1002D, MW1003S, MW1003D, MW1004S, MW1004D, MW1005S, MW1005D, MW1005BR-S, MW700SR, MW701SR, MW701DR-S, MW701DR-I, MW701DR-D, Recharge Wells, Extraction Zone Piezometers, Extractions Wells, and Amended Groundwater for Reinjection.
 - **Schedule for OB-3/BR-1a Reporting:**
 - ❖ April 15, 2004 – Report on operation during the shakedown period (January 1, 2003 to March 15, 2004);
 - ❖ May 1, 2004 – Data (no report required) from first month of operation (March 15 to April 15, 2004);
 - ❖ Quarterly – Reports and data from operation of OB-3/BR-1a due thirty days after the end of the quarter (first report due June 15, 2004)
 - ❖ May 15, 2004 – Technical Report on the operation of OB-3/BR-1a.
 - ❖ A full description of the required operational reports are as listed in the August 19, 2003 letter from NHDOJ, and attached to this permit as **Attachment A**.
8. Issuance of this permit is based on the Groundwater Management Permit Application dated March 15, 2001 and the historical documents found in the Department file DES #198401083. The Department may require additional hydrogeologic studies and/or remedial measures if invalid or inaccurate data are submitted.
9. The portion of the Interim Groundwater Management Zone (GMZ) located on Map R-20, Lot 8 must be defined by surveyed metes and bounds. The Department requires that you provide a full legal description of this property by July 1, 2004. The **Final GMZ** must be described by surveyed metes and bounds, and this information submitted to the Department by September 1, 2004.
10. During the first year of operation of OB-3/BR-1a, (and beyond that for a 'to be determined' duration if deemed necessary by the Department), Collins & Aikman will monitor and evaluate the operation for signs that the Performance Standards will not be met. If monitoring and evaluation indicates that the performance standards will not be met in one or more wells, Collins & Aikman will submit, within 60 days, a corrective action plan to the Department. The corrective action plan will describe the nature of the problem and the corrective action to be taken. If no corrective action is necessary, then a description of why no such action is required will be submitted.

SPECIAL CONDITION FOR THIS PERMIT

11. Recorded property within the Groundwater Management Zone shall include the lots as listed and described in the following table:

(continued)

GWP-198401083-F-001

ATTACHMENT A

AUGUST 19, 2004 LETTER FROM NHDOJ TO SHERILYN B. YOUNG

ATTORNEY GENERAL
DEPARTMENT OF JUSTICE

33 CAPITOL STREET
CONCORD, NEW HAMPSHIRE 03301-6397

PETER W. HEED
ATTORNEY GENERAL



KELLY A. AYOTTE
DEPUTY ATTORNEY GENERAL

August 19, 2003

Sherilyn Burnett Young, Esq.
Rath, Young and Pignatelli, P.A.
One Capital Plaza
Concord, NH 03302

RE: Cardinal Landfill

Dear Sherry:

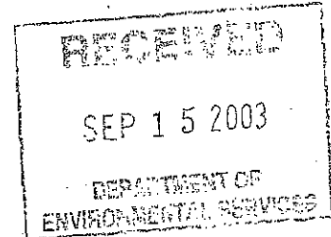
I am writing to summarize the various agreements that were reached during the meeting at your office on August 15, 2003. At the end of this letter, I request that you sign it as noted, keep one original and return an original to my attention. Upon the acknowledgement of these agreements, Collins & Aikman has agreed to withdraw its appeal pending before Director O'Brien. In addition, if an agreement is reached between the parties on the conceptual design of the Modified BR-2 following the September 18, 2003 meeting (described below), I would expect this letter to be modified to incorporate similar agreements on the operation of the Modified BR-2.

General Performance Standard

Collins & Aikman and the State have agreed to apply the following performance standard to the one-year operation of OB-3:

If by March 15, 2005, groundwater concentrations of contaminants of concern (CoC) in both overburden and bedrock do not meet AGQS at one or more monitoring wells at the Final GMZ boundary, the decision to proceed or not with OB-3 will be at the discretion of Environmental Services. Environmental Services will evaluate the supporting data to determine whether long-term operation of OB-3 will achieve compliance at the Final GMZ within a timeframe acceptable to the Environmental Services. The following factors will be considered by Environmental Services in its determination of whether operation of the alternative remedy will continue beyond March 15, 2005:

- a. Groundwater CoC concentrations must show strong obvious and consistent reductions and decreasing trends due to the enhanced bioremediation remedy at the monitoring wells: (a) between the GDT and recharge wells and the Final GMZ, and (b) at the Final GMZ compliance boundary.
- b. Biodegradation rates must be calculated by a method approved by Environmental Services. The calculated biodegradation rates must demonstrate that compliance with AGQS will be achieved within the time required for groundwater to flow from the GDT/recharge wells to the Final GMZ compliance boundary (based on average hydraulic conductivity and bromide tracer data), and that treatment has occurred during the first year of operation within the area of groundwater flow downgradient of the GDT/recharge wells.



August 1, 2005 (approx.): Collins & Aikman to submit technical response to issues raised in comments by Environmental Services, and in the July 20 meeting.

August 30, 2005 (approx.): Second post one-year operation meeting.

September 15, 2005 (approx.): Environmental Services to decision on continued operation of OB-3 or conversion to OB-2.

Modified BR-2 Design


During the week of August 25, 2003, Collins & Aikman will submit to Environmental Services a conceptual design for the Modified BR-2. On September 18, 2003, at 9:00 a.m., the parties will meet at Rath, Young & Pignatelli, P.A. to hold a technical meeting to discuss the conceptual design. If general agreement is reached during that meeting, Collins & Aikman will submit a design report and construction plans for the Modified BR-2 by October 10, 2003. Environmental Services will provide its final or conditional approval by November 1, 2003.

OB-2 Design Report/Construction Plans

Environmental Services has agreed to extend the deadline to submit the OB-2 treatment design report and construction plans to October 1, 2004. Environmental Services will provide its comments within 45 days. Collins & Aikman will provide a final design report and construction plans to Environmental Services with 45 days of receipt of Environmental Services' comments. Environmental Services will complete its review and issue a decision within 45 days of receipt.

I believe this accurately reflects the agreements reached at the August 15, 2003 meeting. Please sign below, keeping one original for your files, and return a duplicate original to me. Execution of this document shall constitute an amendment to the Consent Decree consistent with the conditions stated in this letter.

Thank you for your continued courtesy and cooperation regarding this matter. Please do not hesitate to contact me if you have any questions.

Very truly yours,

Richard W. Head
Assistant Attorney General
Environmental Protection Bureau
(603) 271-3679

cc: John Regan


Sherilyn Young

TABLE 1
GROUNDWATER MANAGEMENT PERMIT MONITORING SCHEDULE
DES 198401083-F-002

| Well ID | Frequency | | | | | GW Elevation | pH, Temperature | VOC (524.2) | VOC (8260B) | VOC (8021B) | Dissolved Arsenic | Total Arsenic (1) | Sulfate/Sulfide | Bromide | Dissolved (2) Hydrocarbon Gases | Acetate | Dissolved Organic Carbon | Monitoring Well Count (##) |
|---|---------------------|--------|-------------|---------|----------------------|--------------|-----------------|-------------|-------------|-------------|-------------------|-------------------|-----------------|---------|------------------------------------|---------|-----------------------------|-------------------------------|
| | Every other Year | Annual | Semi Annual | Monthly | Every other month | | | | | | | | | | | | | |
| UPGRADIENT | | | | | | | | | | | | | | | | | | |
| MW201 | | ✓ | | | | ✓ | ✓ | | | ✓ | | | | | | | | 1. |
| MW401 | | ✓ | | | | ✓ | ✓ | | | ✓ | | | | | | | | 2. |
| MW407SR | | | ✓ | | | ✓ | ✓ | | ✓ | | | | | | | | | 3. |
| MW901 | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 4. |
| PRIMARY LANDFILL | | | | | | | | | | | | | | | | | | |
| MW1A | | | ✓ | | | | ✓ | | ✓ | | | ✓ | | | | | | 5. |
| MW405 | | | ✓ | | | | ✓ | | ✓ | | | ✓ | | | | | | 6. |
| MW3 | | | ✓ | | | | ✓ | | ✓ | | | ✓ | | | | | | 7. |
| MW3A | | | ✓ | | | | ✓ | | ✓ | | | ✓ | | | | | | 8. |
| MW5 | | | ✓ | | | | ✓ | | ✓ | | | ✓ | | | | | | 9. |
| MW6 | | | ✓ | | | | ✓ | | ✓ | | | ✓ | | | | | | 10. |
| SW102 | | | ✓ | | | | ✓ | | ✓ | | | | | | | | | 11. |
| SW105 | | ✓ | | | | | ✓ | | ✓ | | | | | | | | | 12. |
| TREATMENT ZONE | | | | | | | | | | | | | | | | | | |
| Amended GW for ReInjection (Frequency: see note 5 at end of table) | | | | | | | ✓ | | ✓ | | | ✓ | | ✓ | | ✓ | | |

TABLE 1
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| Well ID | Frequency | | | | | GW Elevation | pH, Temperature | VOC (524.2) | VOC (8260B) | VOC (8021B) | Dissolved Arsenic | Total Arsenic (1) | Sulfate/Sulfide | Bromide | Dissolved (2) Hydrocarbon Gases | Acetate | Dissolved Organic Carbon | Monitoring Well Count (##) |
|--|---------------------|--------|-------------|---------|----------------------|--------------|-----------------|-------------|-------------|-------------|-------------------|-------------------|-----------------|---------|------------------------------------|---------|-----------------------------|-------------------------------|
| | Every other Year | Annual | Semi Annual | Monthly | Every other month | | | | | | | | | | | | | |
| Recharge Wells (11 including GDT) (Frequency: see note 6 at end of table) | | | | | | ✓ | | | | | | | | | | | | |
| Extraction Zone Piezometers (17) (Frequency: see note 6 at end of table) | | | | | | ✓ | | | | | | | | | | | | |
| Extraction Wells (7) (Frequency: see note 7 at end of table) | | | | | | ✓ | | | | | | | | ✓ | | | | |
| SW111R | | | ✓ | | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | | | ✓ | 13. |
| SW111DR-S | | | ✓ | | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 14. |
| SW111DR-I | | | ✓ | | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 15. |
| SW111DR-D | | | ✓ | | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 16. |
| PMB10I | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 17. |
| PMB1S | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 18. |
| PMB1D | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 19. |
| PMB2S | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 20. |
| PMB2D | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 21. |
| FMW1S | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 22. |
| FMW1D | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 23. |
| FMW1BR-S | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 24. |
| MW403R | | | ✓ | | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 25. |
| MW602S | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 26. |
| MW602D | | | | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | 27. |

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DES 198401083-F-002

| Well ID | Frequency | | | | | GW Elevation | pH, Temperature | VOC (524.2) | VOC (8260B) | VOC (8021B) | Dissolved Arsenic | Total Arsenic (1) | Sulfate/Sulfide | Bromide | Dissolved (2) Hydrocarbon Gases | Acetate | Dissolved Organic Carbon | Monitoring Well Count (##) |
|--------------------|---------------------|--------|-------------|---------|----------------------|--------------|-----------------|-------------|-------------|-------------|-------------------|-------------------|-----------------|---------|------------------------------------|---------|-----------------------------|-------------------------------|
| | Every other Year | Annual | Semi Annual | Monthly | Every other month | | | | | | | | | | | | | |
| MW602BR-S | | | | ✓ | | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 28. |
| FINAL GMZ BOUNDARY | | | | | | | | | | | | | | | | | | |
| MW402S | | | | ✓(3) | ✓(4) | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | | | 29. |
| MW402D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | | | 30. |
| MW402R | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | 31. |
| MW603S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | ✓ | 32. |
| MW603D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | 33. |
| MW603BR-S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 34. |
| MW700SR | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | | | 35. |
| MW700DR-S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | | | 36. |
| MW700DR-I | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | | | 37. |
| MW700DR-D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | | | 38. |
| MW809 | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | | 39. |
| MW1001S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | ✓ | 40. |
| MW1001D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | 41. |
| MW1001BR-S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | 42. |
| MW1002S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 43. |

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|---------------------------|---------------------|--------|-------------|---------|----------------------|--------------|-----------------|-------------|-------------|-------------|-------------------|-------------------|-----------------|---------|------------------------------------|---------|-----------------------------|-------------------------------|
| | Every other Year | Annual | Semi Annual | Monthly | Every other month | | | | | | | | | | | | | |
| MW1002D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 44. |
| MW1003S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | 45. |
| MW1003D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | 46. |
| MW1004S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | 47. |
| MW1004D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ | ✓ | 48. |
| MW1005S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 49. |
| MW1005D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 50. |
| MW1005BR-S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 51. |
| MW701 SR | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 52. |
| MW701DR-S | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 53. |
| MW701DR-I | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 54. |
| MW701DR-D | | | | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | 55. |
| DOWNGRADIENT OF FINAL GMZ | | | | | | | | | | | | | | | | | | |
| MW202 | | | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | | | | | | | 56. |
| MW301S | | | ✓ | | | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | 57. |
| MW301D | | | ✓ | | | ✓ | ✓ | | | ✓ | | | | ✓ | | | | 58. |
| MW304S | | | ✓ | | | ✓ | ✓ | | | ✓ | | | | | | | | 59. |

TABLE 1
GROUNDWATER MANAGEMENT PERMIT MONITORING SCHEDULE
DES 198401083-F-002

| Well ID | Frequency | | | | | GW Elevation | pH, Temperature | VOC (524.2) - | VOC (8260B) | VOC (8021B) | Dissolved Arsenic | Total Arsenic (1) | Sulfate/Sulfide | Bromide | Dissolved (2) Hydrocarbon Gases | Acetate | Dissolved Organic Carbon | Monitoring Well Count (##) |
|--------------------|---------------------|--------|-------------|---------|----------------------|--------------|-----------------|---------------|-------------|-------------|-------------------|-------------------|-----------------|---------|------------------------------------|---------|-----------------------------|-------------------------------|
| | Every other Year | Annual | Semi Annual | Monthly | Every other month | | | | | | | | | | | | | |
| MW304D | | | ✓ | | | ✓ | ✓ | | | ✓ | | | | | | | | 60. |
| MW305S | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 61. |
| MW305D | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 62. |
| MW305SR | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 63. |
| MW305DR-S (8) | ✓ | | | | | ✓ | ✓ | | ✓ | | | ✓ | | | | | | 64. |
| MW305DR-I (8) | ✓ | | | | | ✓ | ✓ | | ✓ | | | ✓ | | | | | | 65. |
| MW305DR-D (8) | | ✓ | | | | ✓ | ✓ | | ✓ | | | ✓ | | | | | | 66. |
| MW306S | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 67. |
| MW306D | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 68. |
| MW306SR | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 69. |
| MW306DR-S (8) | | ✓ | | | | ✓ | ✓ | | ✓ | | | ✓ | | | | | | 70. |
| MW306DR-D (8) | | ✓ | | | | ✓ | ✓ | | ✓ | | | ✓ | | | | | | 71. |
| BEYOND INTERIM GWZ | | | | | | | | | | | | | | | | | | |
| Robinson-S | | | ✓ | | | ✓ | ✓ | | | ✓ | | | | | ✓ | | | 72. |
| Robinson-I | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | ✓ | | | 73. |
| Robinson-D | | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | | | | 74. |
| MW702DR-S | ✓ | | | | | ✓ | ✓ | | | ✓ | | | | | | | | 75. |
| MW702DR-I | ✓ | | | | | ✓ | ✓ | | | ✓ | | | | | | | | 76. |
| MW702DR-D | ✓ | | | | | ✓ | ✓ | | | ✓ | | | | | | | | 77. |

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DES 198401083-F-002

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|----------------------------------|------------------|--------|-------------|---------|--------------|-----------------|-------------|-------------|-------------|-------------------|-------------------|-----------------|---------|---------------------------------|---------|--------------------------|----------------------------|
| | Every other Year | Annual | Semi Annual | Monthly | | | | | | | | | | | | | |
| MW704SR (8) | | ✓ | | | ✓ | ✓ | | ✓ | | | | | | | | | 78. |
| MW704DR-S (8) | | ✓ | | | ✓ | ✓ | | ✓ | | | | | | | | | 79. |
| MW704DR-D (8) | | ✓ | | | ✓ | ✓ | | ✓ | | | | | | | | | 80. |
| Foss Well (R19/24) | | | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | 81. |
| GP-2 (Farmington Municipal Well) | | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | | 82. |

(##) *Monitoring Well Count* – Does not include the 7 Extraction Wells, 17 Extraction Zone Piezometers, or 11 Recharge Wells.

- (1) Arsenic sampling shall be semi-annual at any of the wells designated.
- (2) DHG monitoring shall be semi-annual for any of the wells designated unless until March 15, 2005.
- (3) Groundwater Elevations in Treatment Zone and at the Final GMZ required monthly until March 15, 2005.
- (4) Analytical Measurements in Treatment Zone and at the Final GMZ required every other month until March 15, 2005.
- (5) Analytical Measurements:
 - i. VOCs, bromide, sulfate/sulfide required every other week until March 15, 2005;
 - ii. acetate required monthly until March 15, 2005.
- (6) Groundwater elevations to be continually logged until March 15, 2005.
- (7) Groundwater elevations to be continually logged, and Bromide to be measured every other week until March 15, 2005.
- (8) Annual monitoring frequency unless contaminant concentrations increase, at which time frequency may be increased to semi-annual.

| Surface Water Sampling Point | Frequency (May & Nov) | pH, Temperature | Water Level Elevations | VOC (8260B) | Total Arsenic |
|------------------------------|-----------------------|-----------------|------------------------|-------------|---------------|
| SW1 | ✓ | ✓ | ✓ | ✓ | ✓ |
| SW2 | ✓ | ✓ | ✓ | ✓ | ✓ |
| SW3 | ✓ | ✓ | ✓ | ✓ | ✓ |
| SW4 | ✓ | ✓ | ✓ | ✓ | ✓ |
| SW5 | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sediment Sampling Point | | | | | |
| SED1 | ✓ | ✓ | | ✓ | ✓ |
| SED2 | ✓ | ✓ | | ✓ | ✓ |
| SED3 | ✓ | ✓ | | ✓ | ✓ |
| SED4 | ✓ | ✓ | | ✓ | ✓ |

